V
cy #L-1
SB
2-24-64

PHOTOGRAPHIC INTELLIGENCE MEMORANDUM

CAMERA RECOMMENDATIONS

OP/I - 159

29 February 1956

CENTRAL INTELLIGENCE AGENCY
Office of Research and Reports

SECRET

2

PHOTO INTELLIGENCE MEMORANDUM 29 February 1956

CAMERA RECOMMENDATIONS

The following data has been prepared in answer to a request by [redacted] DD/P, A:D, concerning the recommendation of a camera to be used on a particular project. The camera recommended is the Fairchild K-43 (USAF designation) low altitude, night reconnaissance camera. This memorandum supersedes OP/I-152 submitted on 7 February 1956.

25X1

Listed below are the capabilities of K-43 camera for operational use:

1. Operational Capabilities:

   Cycling time (max.) = 2 frames per second

   Lens = focal length 6.0", f/2.5

   Operation = Automatic (electrical)

   Shutter Speeds = 1/25, 1/50 and 1/100

   Type of Shutter = Rapidyne, model G-3

   Film load = 250 feet, approximately 500 exposures, on standard base

   Format = 4½" x 4½"

   Hyperfocal Distance = 300 feet

   Angle of view = 41°

   Stereo Coverage, 60% overlap = yes

   Film held flat by vacuum

2. Adaptable for Tri-Camera mounting

   (oblique view up to 35° tilt)

SECRET

3. Adapted for image motion compensation (IMC), for single or tri-camera configuration. The three cameras can be synchronized.
4. Weight of camera body and loaded magazine = 51 lbs. Weight of three cameras = 153 lbs.
5. Outer dimensions per camera = 13¼" length x 10" width x 19" height.
6. The camera requires a maximum of 10 amps at 27 volt D.C. and 3 amps 115 volt 400 cycles regulated. The control system which can operate the K-43 camera requires both 28 volts and 115 volts 400 cycle regulated supplies.
7. Tri-camera mount can be furnished by Fairchild.
8. IMC maximum speed is 9"/sec.
9. Data on enclosed graphs
   a. I. Recycling time for variations in scale, altitude and ground speed.
   b. II. Miles traveled per roll of film (60% overlap) for variations in altitude.
   c. III. Ground distance from nadir to extreme edge of oblique view (Tri-camera) for variations in altitude.
   d. IV. Film velocity for variations in altitude and ground speed.

The CA-12 camera was found unsuitable for the project because of the following reasons:

1. The availability of the mounting and control system is questionable.

2. The f/6.3 aperture is too small.

3. New parameters imposed by [redacted] are too limiting for further consideration of this camera. 25X1